Culture and Medicine

Hospitals in rural America

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Summary points

- The role and structure of rural hospitals is changing, but they continue to be important local and regional centers of health care activity
- Rural hospitals tend to depend more on Medicare and Medicaid patients
- Most rural hospitals are organized on a not-for-profit basis
- Rural hospitals make an important contribution to rural economies; expansion and diversification of the services that they offer will be important in their survival
- The quality of care provided in rural hospitals is generally equal to that provided by urban institutions, with some exceptions

INTRODUCTION

The role of hospitals in the American health care system is changing rapidly, and some believe that hospitals may be replaced by networks of professionals and institutions tied together to coordinate care and promote health—the so-called virtual hospital. For many rural communities, however, the hospital has been the most effective form of health care delivery in the community.

In the 1980s, as the number of rural hospitals closing their doors grew every year, expert observers of the health care sector believed that rural hospitals were perhaps an anachronism and that only those institutions that were large and integrated with other parts of the health care system would survive.[1,2] The leading proposals for national health care financing reform from the White House and Congress in 1993 and 1994 did not provide much comfort for rural hospitals. By 1997, the reality of market changes overtook policy proposals; vertically integrated networks were a growing phenomenon, and the cost-saving potential of managed care was being realized.

Rural hospitals have survived in the present system partly because Medicare payment policies that were discriminatory to rural hospitals have been blunted by legislation and partly because there was a justification for the location and mission of hospitals in rural places. The number of closings dropped dramatically in 1994, and the dominant theme of rural hospital activities in the last half of the 1990s has been adaptation and innovation to meet the challenges of a changing market. Factors such as the rapid diffusion of new management techniques and the adoption of new structures and approaches to health care delivery have enabled rural hospitals to continue in their role as the local and regional centers of health care activity.

This article reviews the numbers, types, and structure of rural hospitals; describes their ownership and control; considers strategies for their survival; and discusses whether the quality of care that they provide equals that provided by urban institutions.

RURAL HOSPITALS: THEIR NUMBERS AND DISTRIBUTIONS

In early 1998, 2,182 nonfederal, acute-care general hospitals in nonmetropolitan counties made up 45% of the 4,821 hospitals total (figure 1). The nonmetropolitan hospitals are smaller: 72% have fewer than 100 beds, and 42% have fewer than 50 beds. Twenty percent of all hospital beds are in rural hospitals. The median number of staffed beds for nonmetropolitan hospitals is 59 compared with 156 for urban hospitals, while the average number of beds per hospital is 82 and 245, respectively. Rural hospital inpatient days account for 20% of all hospital inpatient days in the United States. Medicare and Medicaid are important sources of payment for hospital patients.

While there are substantial variations in hospital dependence on Medicare payments, rural hospitals tend to depend more on Medicare and Medicaid patients. Medicare pays for almost half of all rural hospital discharges compared with 37% for metropolitan hospitals. However, urban hospitals have higher use by Medicaid patients: 27% of all urban hospital days are for Medicaid patients while only 17% are for rural hospitals.

The use of urban and rural hospitals differed in 1996; urban hospitals had higher occupancy rates, but shorter lengths of stay (figure 2)

The distribution and characteristics of rural hospitals varies by geography—larger communities are much more likely to have a hospital than smaller communities.

OWNERSHIP AND CONTROL OF RURAL HOSPITALS

Hospital ownership and control are increasingly of interest to policy makers. The majority of rural hospitals are government-owned or fall under some other nonprofit classification; urban hospitals are predominantly owned by some other public sector entity that may not be a formal part of local government. A larger proportion of rural hospitals (23%) are contract-managed, compared with only 7% in urban areas. The type of government control can range from county to regional authority to state. More than twice the percentage of nonmetropolitan hospitals are controlled by government than are metropolitan hospitals (table 1). The number of nonmetropolitan hospitals that are organized on a for-profit basis is less than one-fourth that of metropolitan hospitals.

Of hospitals controlled by some government agency, county government and hospital districts account for the large majority of sponsors (figure 3).

RURAL HOSPITAL SURVIVAL

Between 1980 and 1998, there was an 11.8% decrease in the total number of community general hospitals due to closings, mergers, and conversions. The hospitals most vulnerable to closing or conversions were those that had fewer beds, had lower occupancy rates, were more often managed as a for-profit concern, were less likely to be accredited by the Joint Commission on Accreditation of Health Care Organizations (JCAHO), and had a high percentage of Medicaid inpatient days.[3] Among isolated hospitals, those in markets with higher population density were also more likely to close.[4] Studies that examined the effects of closed hospitals on local communities found significant changes in utilization, and in one case, health status.[5-7]

Economic contribution of rural hospitals

One of the key arguments in support of the continued subvention of rural hospitals by government and the removal of differential reimbursement rates for rural hospitals, is their contribution to overall rural economies. Doeksen, Christianson, and others have shown that rural hospitals contribute significantly to local economies and that rural hospitals serve as a source of employment and act as economic engines for many rural communities.[8-11]

Rural hospitals are often the largest or second largest employer in the towns where they are located, and they are an important part of the social capital of any community. The immense efforts taken by some communities to keep their hospitals open and operating is a measure of the great value people and communities place on a hospital.[12]

Strategies for rural hospital survival

During the period 1994 through 1997, a total of 28 rural hospitals closed, an average of 7 a year. Rural hospitals, like their urban counterparts, began to adapt to new market realities, including the need for greater accountability under managed care and the need to use available resources more efficiently. Studies of the strategies rural hospitals used for survival showed the importance of local resources, especially income-generating characteristics of the community, including the relative wealth of the population, employment patterns, and state-level policies that supported the hospitals.[12]

It is clear from the analysis of hospital survival that the conditions that confront the smallest rural hospitals are fundamentally different from what other hospitals experience. This is reflected in the recent development of policy to support alternative hospital structures and designs, including the Medical Assistance Facility, the Rural Primary Care Hospital, and the Critical Access Hospital. Management strategies for survival have varied, and there is no single, preferred blueprint for success for administrators.[13] However, there are abundant models of innovation and partnering[14] and of successful integration into networks[15].

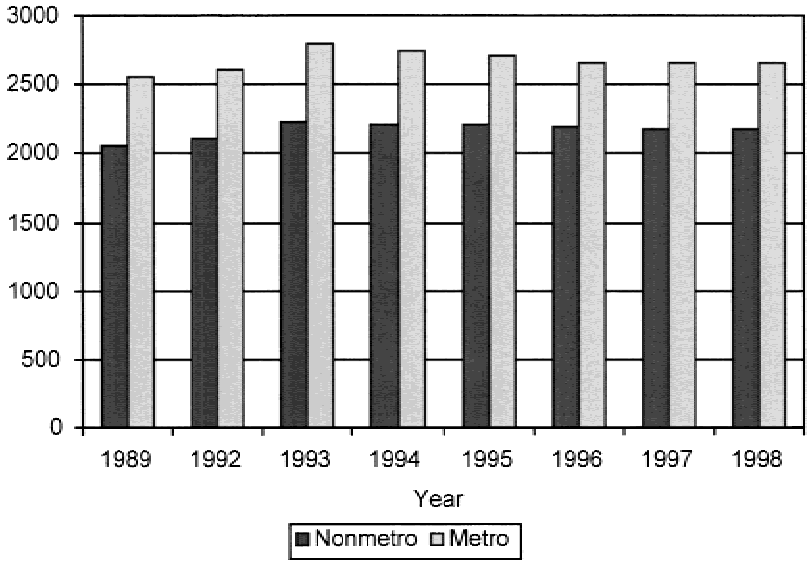


Figure 1 Number of nonmetropolitan and metropolitan hospitals, 1989-1998. (Source: Data from Annual Hospital Surveys for 1989–1998. Chicago: American Hospital Association. Ricketts TC, Heaphy P. Rural acute care hospitals that closed, 1991–1998. Chapel Hill, NC: Rural Health Research Program, Cecil G Sheps Center for Health Services, 1998.)

There are many examples of communities banding together to save their small, rural hospital, but to be saved, many of the hospitals had to change. The options for change were once limited because of strict license and payment rules from Medicare and state Medicaid agencies. Since the mid 1980s, those options have expanded,

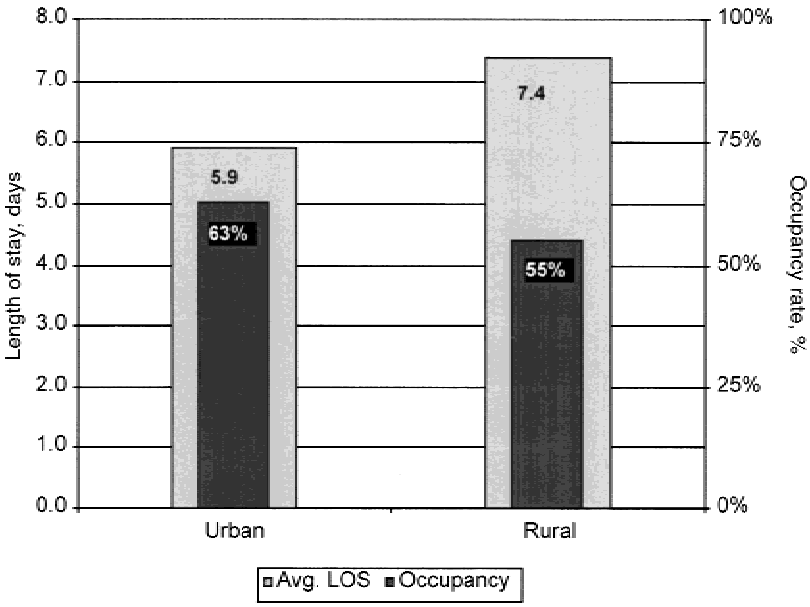


Figure 2 Hospital occupancy rate and average length of stay: urban and rural hospitals, 1996. LOS, length of stay. (Source: 1997 Annual Survey of Hospitals. Chicago: American Hospital Association.)

Table 1 *Hospital ownership and control, 1996*

	Number (% of total) Metro	Nonmetro
All hospitals	4018 (62.3%)	2430 (37.7%)
Hospitals controlled by		
Government	880 (21.9%)	1,110 (45.7%)
Church	447 (11.1%)	160 (6.6%)
Other nonprofit	1,740 (43.3%)	939 (38.6%)
For profit	951 (23.7%)	221 (9.1%)

Source: 1997 Annual Survey of Hospitals. Chicago: American Hospital Association.

both for vehicles to finance hospitals beyond the traditional corporate, nonprofit foundation, and authority structures, as well as in the forms that hospitals can take as they adapt. The organizational forms that are possible can be described in a matrix that scales the operational autonomy against the range of services offered at the facility (figure 4).

The options shown in figure 4 include affiliations that may expand or reduce the number of services offered at the facility while it remains an acute-care general hospital. Rural hospitals are flexible and can expand and diversify the service they offer to meet local needs for long-term care and specialized services.

Options for conversion include modifying the facility so that it ceases to be a hospital and becomes a primary-care center or an outpatient facility that specializes in surgery or diagnostic and evaluation activities. Many rural hospitals have converted to long-term care facilities because the existing physical structure allows for this modi-

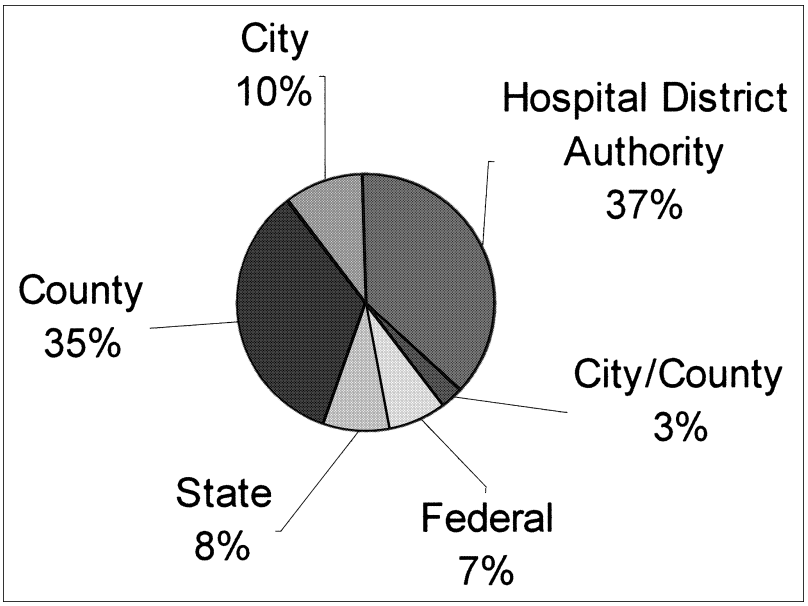
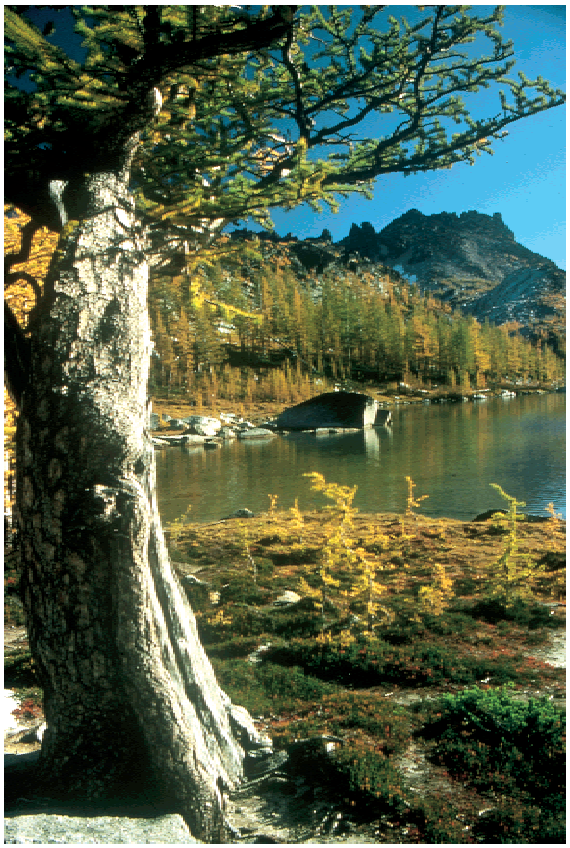


Figure 3 Type of control of public nonmetropolitan hospitals (Source: 1996 Annual Survey of Hospitals. Chicago: American Hospital Association.)



Douglas Diekema

Diversity: The approach in Prairie Du Chien, Wisconsin

Prairie du Chien Memorial Hospital, located in a community of 6,000 in Wisconsin, presents a case of an innovative hospital whose success can be attributed to its ability to do just about everything. This Crawford County hospital has a $6.5 million surplus and a 15% operating margin. The hospital has 44 beds, 22 of which are long-term care beds, and offers not only emergency, acute, and skilled nursing care, but also respite care, home health, durable medical equipment, home oxygen, and rehabilitation services. It has even expanded beyond providing just hospital-related services and now delivers meals to home-bound elderly people, operates a senior meal site in its cafeteria, manages an assisted living complex for seniors, operates a day care center, and contracts with the local prison to provide linen service and meals. "With all of these services, many of which are private pay, we can spread our overhead and be very efficient," says CEO Harold Brown. "[And] except for the assisted living, none of this takes a lot of capital." The multiple programs have created spin-off effects: The older people who come for lunch at the cafeteria will visit inpatients, and the drivers who deliver meals to people at home check on them and report problems. Such an arrangement demonstrates the success of a diversification scheme that not only provides more services, but also brings together the community citizens.

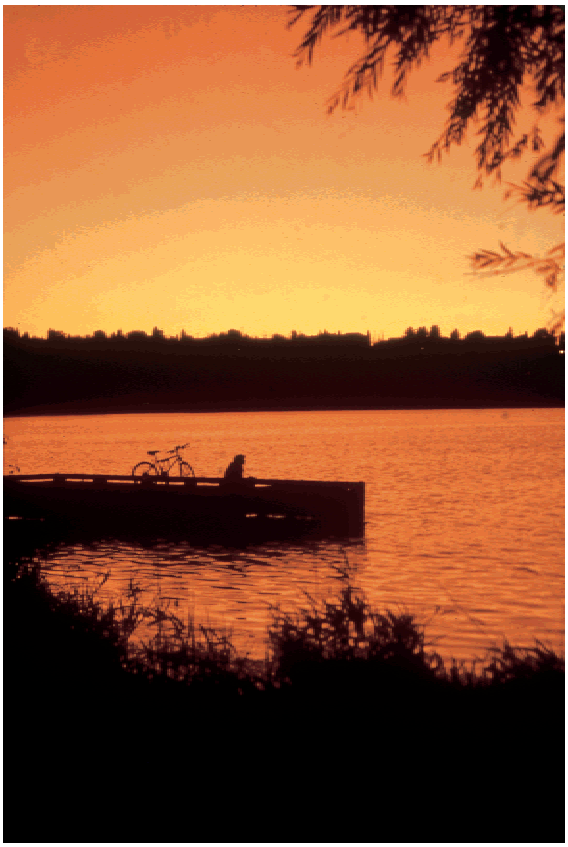
Source: Ready or not: rural hospitals are changing. Rural Health News 1997;4.

fication. Conversion is one option that can keep the organization running and the community presence alive.[16] However, the loss of emergency or obstetrical services, core components of a "real hospital," may force people to travel outside the community for some health care services.

Rural hospitals have been able to reconfigure their structures to provide a broader or more appropriate mix of services; some have converted many or all of their beds to long-term care while others emphasize outpatient care. Networks have been created among rural hospitals, or affiliations have been established with larger hospitals, physician groups, or other health care providers. In each case, the ultimate goal is to meet market needs and ensure institutional survival.

QUALITY OF CARE

The quality of care provided in rural hospitals has generally been accepted as equal to that provided in urban institutions, with some exceptions. A controversial article by a team of R and investigators brought the issue of quality in small rural hospitals to the attention of a wider group of researchers.[17] The US Agency for Health Care Policy and Research contracted for a careful review of the evidence for whether low volumes and other characteristics of small, rural hospitals might affect patient outcomes.[18] The study found strong evidence of a volume-outcome effect for a certain set of conditions and



Douglas Diekema

Clinical care program improves provider coordination and patient care

Rutland Regional Medical Center is a 188-bed hospital that serves a 6-county region in rural Vermont. In 1993, personnel at the hospital decided to assemble a working group to focus upon the ongoing problem of long lengths of stay. After looking at the multiple factors that affect patient outcomes and utilization—patient, nursing, physician, organizational, and environmental characteristics—the team decided to focus upon improving the clinical coordination of care. Their solution was to establish a Clinical Care Coordinator Program headed by "super nurses." The goal of the program was to facilitate patient care, increase the efficiency and communication of medical teams, and implement the continuous quality improvement process. At the end of 1 year, it was determined that not only had length of stay decreased significantly, but the medical staff was able to conduct rounds more smoothly, and patients and family members liked the access to a specific person who would listen and answer questions. Positive effects of the program include enhanced problem identification, improved communication, and increased patient satisfaction. The success of the program has not only improved the quality of care at Rutland Regional Medical Center, but has lead to its replication in the orthopedics service and community cancer center.

Source: Winstead-Fry P, Bormolini S, Keech RR. Clinical care coordination program—a working partnership. *J Nurs Adm* 1995; 25:46-51.

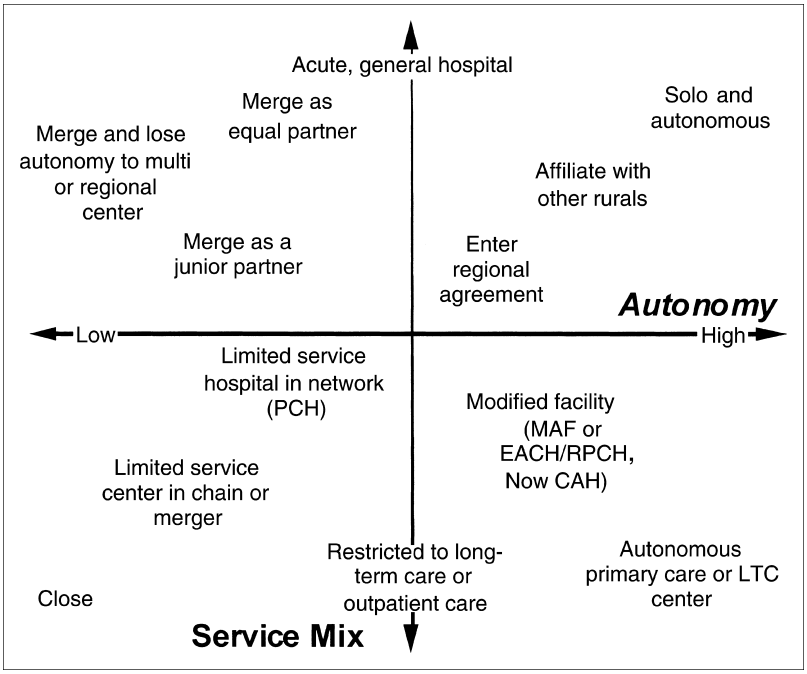


Figure 4 Strategic options for rural hospitals (Source: *Rural Health News* 1997:4.) PCH = primary care hospital; MAF = medical assistance facility; EACH/RPCH = essential access community hospital/rural primary care hospital; CAH = critical access hospital; LTC = long-term care.

Table 2 *Rural hospital focus on quality and community health needs*

	% of total 1993	1996	% change
Work in concert to conduct a health status assessment of the community			
Nonmetro	53.0	78.0	25.1
Metro	61.4	83.6	22.1
Used assessment to identify unmet health needs, excess capacity or duplicative services			
Nonmetro	56.4	61.7	5.3
Metro	64.8	74.0	9.2
Used health status indicators to design or modify services			
Nonmetro	47.8	65.2	17.3
Metro	67.2	82.2	15.1
Share clinical and health information with cooperating organizations			
Nonmetro	47.2	61.8	14.7
Metro	65.5	78.6	13.1
Disseminate cost and quality to the community			
Nonmetro	40.7	48.1	7.4
Metro	48.6	64.5	16.0

Source: 1997 Annual Survey of Hospitals. Chicago: American Hospital Association.

procedures, with low volumes associated with poorer outcomes. However, most procedures for which a volume-outcome relationship has been demonstrated are not typically performed in small rural hospitals. The strongest relationship between volume and outcomes has been found for coronary artery bypass graft or open heart surgery; total hip replacement, intra-abdominal artery operation or resection; cardiac catheterization and angiography; and transurethral prostatectomy. All but the last procedure were unlikely to be carried out in small rural hospitals. The analysis highlights that many procedures and conditions commonly treated in rural and urban hospitals have not been studied for a volume-outcome effect and that all hospitals need to improve their assessment of their patient care quality.

Assessing quality of care, health outcomes, and provider performance is a growing area of health care. Some would say that it is becoming a common part of the health care system as reports of hospital and health plan performance are more commonly published and disseminated. The increasing interest in quality comes when many are concerned that managed care may adversely affect quality through its focus on controlling costs. Although there is very little research evidence to support this belief, it has become a motivating reason to move away from a health care system based almost completely on price. Some hospitals have adopted continuous quality techniques to improve care, while many others with small staffs and limited resources have found it difficult to support a full-time quality assurance program. In spite of these limitations, many rural hospitals are addressing the needs of the community and finding opportunities to improve quality of care. In 1996, 78% of rural hospitals reported that they had worked in concert to assess the health status of the community, while only 65% said that they use health status indicators to design or modify services. The overall trend is toward an increased focus on quality and community needs, yet rural hospitals lag behind their urban counterparts (table 2.)

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